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**Author**

KLEGERIS, Andis

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Andis Klegeris ...

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**Abstract**

The ability to effectively problem solve is a highly valued competency expected of university graduates, independent of their area of study. Evaluation of problem-solving skill (PSS) development is hindered by a shortage of available tools for monitoring student progress and by lack of defined instructional strategies for development of these skills. Our research is aimed at addressing these problems. We have developed an evaluation tool, which we applied to study the dynamics of undergraduate student PSS. We tested first- and upper-year students from 26 different courses (total enrollment of 2229 students). Overall improvement of PSS was detected for the first-year students over their first term of study. There were no significant differences between the PSS of first- and upper-year students, and no improvement was detected over a single term by measuring PSS in upper-year students. Only three courses were effective at facilitating PSS. Our data indicate that most of the standard lecture approaches do not develop undergraduate student PSS and that universities and individual instructors must take active steps to advance this critical skill set in university

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students.(HRK / Abstract übernommen) Klegeris, Andis, E-Mail: [andis.klegieris@ubc.ca](mailto:andis.klegieris@ubc.ca)